

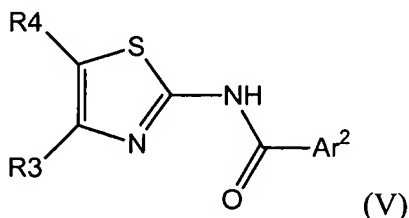
I. Amendments to the Claims

This listing of claims will replace all prior versions of claims in the application, including replacement of the claims submitted with Applicants' amendment dated December 26, 2007.

Listing of Claims

Claims 1-4. (Cancelled)

Claim 5. (Currently Amended) A 2-acylaminothiazole derivative represented by the following general Formula V or a pharmaceutically acceptable salt thereof:

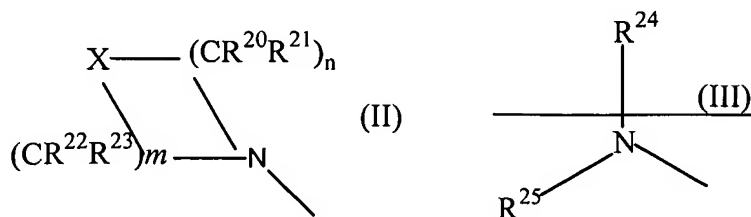


wherein the symbols have the following meanings:

Ar²: a substituted or unsubstituted phenyl or monocyclic aromatic heterocycle, ~~each of which may be substituted~~ (with the proviso that indol-2-yl is excluded and that when R³ is aryl or pyridyl, each of which can be substituted with one or more groups selected from the group consisting of lower alkyl, -CO-lower alkyl, -COO-lower alkyl, -OH, -O-lower alkyl, -OCO-lower alkyl, and halogen, and R⁴ is a group represented by Formula II, then Ar² is not phenyl or pyridyl, each of which can be substituted with one or more groups selected from the group consisting of lower alkyl, -CO-lower alkyl, -COO-lower alkyl, -OH, -O-lower alkyl, -OCO-lower alkyl, and halogen),

R³: aryl or monocyclic aromatic heterocycle, each of which may be substituted,

R^4 : a group represented by the general formula (II) ~~or (III)~~:



wherein the symbols have the following meanings,

n : ~~an integer of 1 to 3~~ is 2

m : ~~an integer of 1 to 3~~ is 2

(~~when n or m is an integer of 2 or more, $\text{CR}^{20}\text{R}^{21}$ and $\text{CR}^{22}\text{R}^{23}$ may be identical or different~~),

X : ~~O, S, or a group represented by~~ is a group represented by N-R^{26} or $\text{C}(\text{-R}^{27})\text{-R}^{28}$,

~~Each of R^{20} , R^{21} , R^{22} , R^{23} , R^{26} , R^{27} , or R^{28} which may be identical or different, is independently selected from the group consisting of~~ $-\text{H}$; $-\text{OH}$; $-\text{O}$ -lower alkyl; optionally substituted lower alkyl; optionally substituted cycloalkyl; optionally substituted aryl; optionally substituted arylalkyl; optionally substituted aromatic heterocycle; optionally substituted aromatic heterocyclic alkyl; optionally substituted nonaromatic heterocycle; optionally substituted lower alkenyl; optionally substituted lower alkylidene; $-\text{COOH}$; $-\text{COO}$ -lower alkyl; $-\text{COO}$ -lower alkenyl; $-\text{COO}$ -lower alkylene-aryl; $-\text{COO}$ -lower alkylene-aromatic heterocycle; carbamoyl or amino, each of which may be substituted with one or more groups selected from the group consisting of lower alkyl and cycloalkyl, each of which may be substituted with halogen, $-\text{OH}$, $-\text{O}$ -lower alkyl, or $-\text{O}$ -aryl; $-\text{NHCO}$ -lower alkyl; and oxo; ~~and~~

~~R^{24} , R^{25} may be identical or different, $-\text{H}$, optionally substituted lower alkyl, optionally substituted cycloalkyl, or optionally substituted nonaromatic heterocycle.~~

Claim 6. (Cancelled)

Claim 7. (Currently Amended) The compound according to claim 5, wherein R³ is ~~phenyl or thienyl, each of~~ which can be substituted; R⁴ is a group represented by the general Formula (II); and Ar² is phenyl or pyridyl, each of which can be substituted.

Claim 8. (Cancelled)

Claim 9. (Currently amended) The compound according to claim ~~5~~, wherein R³ is phenyl or thienyl, each of which can be substituted with 1 to 3 halogen atoms (when substituted with 2 or 3 halogen atoms, the halogen atoms can be identical or different).

Claim 10. (Original) The compound according to claim 9, wherein R⁴ is 4-(piperidin-1-yl)piperidin-1-yl, 4-propylpiperidin-1-yl, 4-cyclohexylpiperazin-1-yl, or 4-propylpiperazin-1-yl.

Claim 11. (Currently amended) The compound according to claim 10, wherein Ar² is phenyl which is unsubstituted at 2- and 6-positions, substituted with -H, -F, -Cl, or -Br at 3-position, substituted with -F, -Cl, or -Br at 5-position, and substituted at 4-position; or Ar² is pyridin-3-yl which is unsubstituted at 2- and 4-positions, substituted with -F, -Cl, or -Br at 5-position, and substituted at 6-position.

Claim 12. (Previously presented) The compound according to claim 11, wherein Ar² is phenyl which is substituted at 4-position with a group selected from the group consisting of -O-R^Y, -NH-R^Y, optionally substituted piperidin-1-yl and optionally substituted piperazin-1-yl; or pyridin-3-yl which is substituted at 6-position with a group selected from the group consisting of -O-R^Y, -NH-R^Y,

optionally substituted piperidin-1-yl and optionally substituted piperazin-1-yl, (wherein R^Y is lower alkyl which can be substituted with one or more groups selected from the group consisting of -OH, -O-lower alkyl, amino which can be substituted with one or two lower alkyl, -CO₂H, -CO-lower alkyl, carbamoyl which can be substituted with one or two lower alkyl, cyano, aryl, aromatic heterocycle, nonaromatic heterocycle and halogen).

Claim 13. (Currently amended) A compound selected from the group consisting of

N-[4-(4-chlorothiophen-2-yl)-5-(4-cyclohexylpiperazin-1-yl)thiazol-2-yl]-3-fluoro-4-hydroxybenzamide,

3-chloro-N-[4-(4-chlorothiophen-2-yl)-5-(4-cyclohexylpiperazin-1-yl)thiazol-2-yl]-4-(2-hydroxyethoxy)benzamide,

N-[4-(4-chlorothiophen-2-yl)-5-(4-propylpiperidino)thiazol-2-yl]-2-methoxyisonicotinamide,

N-[4-(4-chlorothiophen-2-yl)-5-(4-cyclohexylpiperazin-1-yl)thiazol-2-yl]isoquinoline-6-carboxamide,

3-chloro-N-[4-(4-chlorothiophen-2-yl)-5-(4-propylpiperazin-1-yl)thiazol-2-yl]-4-(2-hydroxyethoxy)benzamide,

5-chloro-N-[4-(4-chlorothiophen-2-yl)-5-(4-cyclohexylpiperazin-1-yl)thiazol-2-yl]-6-(3-hydroxypropoxy)nicotinamide,

5-chloro-N-[4-(4-chlorothiophen-2-yl)-5-(4-cyclohexylpiperazin-1-yl)thiazol-2-yl]-6-[(3-hydroxypropyl)amino]nicotinamide,

1-(3-chloro-5-{[4-(4-chlorothiophen-2-yl)-5-(4-cyclohexylpiperazin-1-yl)thiazol-2-yl]carbamoyl}-2-pyridyl)piperidine-4-carboxylic acid,

1-(3-chloro-5-{[4-(4-chlorothiophen-2-yl)-5-(4-propylpiperazin-1-yl)thiazol-2-yl]carbamoyl}-2-pyridyl)piperidine-4-carboxylic acid,

N-[4-(4-chlorothiophen-2-yl)-5-(4-cyclohexylpiperazin-1-yl)thiazol-2-yl]-4-(4-cyanopiperidino)-3,5-difluorobenzamide,

1-(2-chloro-4-{[4-(4-chlorothiophen-2-yl)-5-(4-cyclohexylpiperazin-1-yl)thiazol-2-yl]carbamoyl}phenyl)-piperidine-4-carboxylic acid,
1-(2-chloro-4-{[4-(4-chlorothiophen-2-yl)-5-(4-cyclohexylpiperazin-1-yl)thiazol-2-yl]carbamoyl}-6-fluorophenyl)piperidine-4-carboxylic acid,
1-(2-chloro-4-{[4-(4-chlorothiophen-2-yl)-5-(4-propylpiperazin-1-yl)thiazol-2-yl]carbamoyl}phenyl)piperidine-4-carboxamide,
5-chloro-N-[4-(4-chlorothiophen-2-yl)-5-(4-cyclohexylpiperazin-1-yl)thiazol-2-yl]-6-(4-hydroxymethylpiperidino)nicotinamide,
1-(3-chloro-5-{[5-(4-cyclohexylpiperazin-1-yl)-4-(4-fluorophenyl)thiazol-2-yl]carbamoyl}-2-pyridyl)piperidine-4-carboxylic acid,
1-(3-chloro-5-{[5-(4-cyclohexylpiperazin-1-yl)-4-(3-trifluoromethylphenyl)thiazol-2-yl]carbamoyl}-2-pyridyl)piperidine-4-carboxylic acid,
5-chloro-N-[4-(4-chlorothiophen-2-yl)-5-(4-cyclohexylpiperazin-1-yl)thiazol-2-yl]-6-{4-[(2-methoxyethyl)carbamoyl]piperidino}nicotinamide,
5-chloro-N-[4-(4-chlorothiophen-2-yl)-5-(4-cyclohexylpiperazin-1-yl)thiazol-2-yl]-6-{4-[(3-methoxypropyl)carbamoyl]piperidino}nicotinamide,
5-chloro-N-[4-(4-chlorothiophen-2-yl)-5-(4-cyclohexylpiperazin-1-yl)thiazol-2-yl]-6-[4-(morpholinocarbonyl)piperidino]nicotinamide, and
a pharmaceutically acceptable ~~salt~~ salts thereof.

Claims 14-17. (Cancelled)

Claim 18. (New) The compound according to claim 5, wherein the compound is N-[4-(4-chlorothiophen-2-yl)-5-(4-cyclohexylpiperazin-1-yl)thiazol-2-yl]-3-fluoro-4-hydroxybenzamide.

Claim 19. (New) The compound according to claim 5, wherein the compound is 3-chloro-N-[4-(4-chlorothiophen-2-yl)-5-(4-cyclohexylpiperazin-1-yl)thiazol-2-yl]-4-(2-hydroxyethoxy)benzamide, or a pharmaceutically acceptable salt thereof.

Claim 20. (New) The compound according to claim 5, wherein the compound is N-[4-(4-chlorothiophen-2-yl)-5-(4-propylpiperidino)thiazol-2-yl]-2-methoxyisonicotinamide, or a pharmaceutically acceptable salt thereof.

Claim 21. (New) The compound according to claim 5, wherein the compound is N-[4-(4-chlorothiophen-2-yl)-5-(4-cyclohexylpiperazin-1-yl)thiazol-2-yl]isoquinoline-6-carboxamide, or a pharmaceutically acceptable salt thereof.

Claim 22. (New) The compound according to claim 5, wherein the compound is 3-chloro-N-[4-(4-chlorothiophen-2-yl)-5-(4-propylpiperazin-1-yl)thiazol-2-yl]-4-(2-hydroxyethoxy)benzamide, or a pharmaceutically acceptable salt thereof.

Claim 23. (New) The compound according to claim 5, wherein the compound is 5-chloro-N-[4-(4-chlorothiophen-2-yl)-5-(4-cyclohexylpiperazin-1-yl)thiazol-2-yl]-6-(3-hydroxypropoxy)nicotinamide, or a pharmaceutically acceptable salt thereof.

Claim 24. (New) The compound according to claim 5, wherein the compound is 5-chloro-N-[4-(4-chlorothiophen-2-yl)-5-(4-cyclohexylpiperazin-1-yl)thiazol-2-yl]-6-[(3-hydroxypropyl)amino]nicotinamide, or a pharmaceutically acceptable salt thereof.

Claim 25. (New) The compound according to claim 5, wherein the compound is 1-(3-chloro-5-{[4-(4-chlorothiophen-2-yl)-5-(4-cyclohexylpiperazin-1-yl)thiazol-2-yl]carbamoyl}-2-pyridyl)piperidine-4-carboxylic acid, or a pharmaceutically acceptable salt thereof.

Claim 26. (New) The compound according to claim 5, wherein the compound is 1-(3-chloro-5-{[4-(4-chlorothiophen-2-yl)-5-(4-propylpiperazin-1-yl)thiazol-2-yl]carbamoyl}-2-pyridyl)piperidine-4-carboxylic acid, or a pharmaceutically acceptable salt thereof.

Claim 27. (New) The compound according to claim 5, wherein the compound is N-[4-(4-chlorothiophen-2-yl)-5-(4-cyclohexylpiperazin-1-yl)thiazol-2-yl]-4-(4-cyanopiperidino)-3,5,-difluorobenzamide, or a pharmaceutically acceptable salt thereof.

Claim 28. (New) The compound according to claim 5, wherein the compound is 1-(2-chloro-4-{[4-(4-chlorothiophen-2-yl)-5-(4-cyclohexylpiperazin-1-yl)thiazol-2-yl]carbamoyl}phenyl)-piperidine-4-carboxylic acid, or a pharmaceutically acceptable salt thereof.

Claim 29. (New) The compound according to claim 5, wherein the compound is 1-(2-chloro-4-{[4-(4-chlorothiophen-2-yl)-5-(4-cyclohexylpiperazin-1-yl)thiazol-2-yl]carbamoyl}-6-fluorophenyl)piperidine-4-carboxylic acid, or a pharmaceutically acceptable salt thereof.

Claim 30. (New) The compound according to claim 5, wherein the compound is 1-(2-chloro-4-{[4-(4-chlorothiophen-2-yl)-5-(4-propylpiperazin-1-yl)thiazol-2-yl]carbamoyl}phenyl)piperidine-4-carboxamide, or a pharmaceutically acceptable salt thereof.

Claim 31. (New) The compound according to claim 5, wherein the compound is 5-chloro-N-[4-(4-chlorothiophen-2-yl)-5-(4-cyclohexylpiperazin-1-yl)thiazol-2-yl]-6-(4-hydroxymethylpiperidino)nicotinamide, or a pharmaceutically acceptable salt thereof.

Claim 32. (New) The compound according to claim 5, wherein the compound is 1-(3-chloro-5-{[5-(4-cyclohexylpiperazin-1-yl)-4-(4-fluorophenyl)thiazol-2-yl]carbamoyl}-2-pyridyl)piperidine-4-carboxylic acid, or a pharmaceutically acceptable salt thereof.

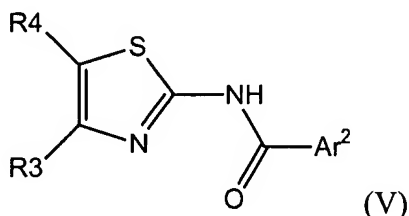
Claim 33. (New) The compound according to claim 5, wherein the compound is 1-(3-chloro-5-{[5-(4-cyclohexylpiperazin-1-yl)-4-(3-trifluoromethylphenyl)thiazol-2-yl]carbamoyl}-2-pyridyl)piperidine-4-carboxylic acid, or a pharmaceutically acceptable salt thereof.

Claim 34. (New) The compound according to claim 5, wherein the compound is 5-chloro-N-[4-(4-chlorothiophen-2-yl)-5-(4-cyclohexylpiperazin-1-yl)thiazol-2-yl]-6-{4-[(2-methoxyethyl)carbamoyl]piperidino}nicotinamide, or a pharmaceutically acceptable salt thereof.

Claim 35. (New) The compound according to claim 5, wherein the compound is 5-chloro-N-[4-(4-chlorothiophen-2-yl)-5-(4-cyclohexylpiperazin-1-yl)thiazol-2-yl]-6-{4-[(3-methoxypropyl)carbamoyl]piperidino}nicotinamide, or a pharmaceutically acceptable salt thereof.

Claim 36. (New) The compound according to claim 5, wherein the compound is 5-chloro-N-[4-(4-chlorothiophen-2-yl)-5-(4-cyclohexylpiperazin-1-yl)thiazol-2-yl]-6-[4-(morpholinocarbonyl)piperidino]nicotinamide, or a pharmaceutically acceptable salt thereof.

Claim 37. (New) A 2-acylaminothiazole derivative compound represented by the following general Formula (V), or a pharmaceutically acceptable salt thereof:

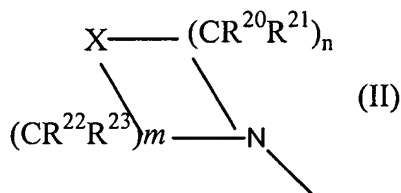


wherein the symbols have the following meanings:

Ar^2 : optionally substituted phenyl or monocyclic aromatic heterocycle, with the proviso that indol-2-yl is excluded;

R^3 : an optionally substituted thienyl;

R^4 : a group represented by Formula II:



wherein X is $C(R^{27})R^{28}$ or NR^{26} and $m=n=2$;

wherein $CR^{20}R^{21}$ and $CR^{22}R^{23}$ can be identical or different; and

wherein each of R^{20} , R^{21} , R^{22} , R^{23} , R^{26} , R^{27} , or R^{28} can be the same or different and can be selected from the group consisting of -H; -OH; -O-lower alkyl; optionally substituted lower alkyl; optionally substituted cycloalkyl; optionally substituted aryl; optionally substituted arylalkyl; optionally substituted aromatic heterocycle; optionally substituted aromatic heterocyclic alkyl; optionally substituted nonaromatic heterocycle; optionally substituted lower alkenyl; optionally substituted lower alkylidene; -COOH; -COO-lower alkyl; -COO-lower alkenyl; -COO-lower alkylene-aryl; -COO-lower alkylene-aromatic heterocycle;

carbamoyl or amino, each of which can be substituted with one or more groups selected from the group consisting of lower alkyl and cycloalkyl, each of which can be substituted with halogen, -OH, -O-lower alkyl, or -O-aryl; -NHCO-lower alkyl; and oxo.

Claim 38. (New) The compound according to claim 37, wherein Ar² is phenyl or pyridyl, each of which can be substituted.

Claim 39. (New) The compound according to claim 37, wherein R³ is a thienyl which is substituted with 1 to 3 halogen atoms, which can be identical or different.

Claim 40. (New) The compound according to claim 37, wherein R⁴ is 4-(piperidin-1-yl)piperidin-1-yl, 4-propylpiperidin-1-yl, 4-cyclohexylpiperazin-1-yl, or 4-propylpiperazin-1-yl.

Claim 41. (New) The compound according to claim 37, wherein Ar² is phenyl which is unsubstituted at 2- and 6-positions, substituted with -H, -F, -Cl, or -Br at 3-position, substituted with -F, -Cl, or -Br at 5-position, and substituted at 4-position; or pyridin-3-yl which is unsubstituted at 2- and 4-positions, substituted with -F, -Cl, or -Br at 5-position, and substituted at 6-position.

Claim 42. (New) The compound according to claim 37, wherein Ar² is phenyl which is substituted at 4-position with a group selected from the group consisting of -O-R^Y, -NH-R^Y, optionally substituted piperidin-1-yl and optionally substituted piperazin-1-yl; or pyridin-3-yl which is substituted at 6-position with a group selected from the group consisting of -O-R^Y, -NH-R^Y, optionally substituted piperidin-1-yl and optionally substituted piperazin-1-yl, wherein R^Y is lower alkyl which can be substituted with one or more groups selected from the group consisting of -OH, -O-lower alkyl, amino which can be substituted with one

or two lower alkyl, -CO₂H, -CO-lower alkyl, carbamoyl which can be substituted with one or two lower alkyl, cyano, aryl, aromatic heterocycle, nonaromatic heterocycle and halogen.

Claim 43. (New) The compound according to any one of claims 5, 25 and 37 wherein the pharmaceutically acceptable salt is a maleate salt.

Claim 44. (New) A pharmaceutical composition comprising a therapeutically effective amount of any one of the pharmaceutical compounds of claims 5, 7, 9-13 and 18-42 and a pharmaceutically acceptable carrier.

Claim 45. (New) A pharmaceutical composition comprising a therapeutically effective amount of a compound of claim 43 and a pharmaceutically acceptable carrier.

Claim 46. (New) The pharmaceutical composition according to claim 44, wherein the pharmaceutical composition is formulated for oral administration.

Claim 47. (New) The pharmaceutical composition according to claim 45, wherein the pharmaceutical composition is formulated for oral administration.